

**Amendments to the Specification**

Please replace the current **Title** of the pending application with the following title:

“Stimulated and Coherent anti-Stokes Raman Spectroscopic Methods for the Detection of Molecules”

Please amend the **Abstract** as follows:

Spectroscopic analysis [[systems and]] methods [[for analyzing samples]] are disclosed. Such methods include irradiating a sample containing a molecule of interest in a resonance chamber and scattering radiation from the sample. The scattered radiation can be resonated in the chamber and transmitted from the chamber for detection. ~~An analysis system may contain an electromagnetic radiation source to provide radiation, a spectroscopic analysis chamber to perform a coherent Raman spectroscopy (e.g., stimulated Raman or coherent anti Stokes Raman spectroscopy), and a radiation detector to detect radiation based on the spectroscopy. The chamber may have a resonant cavity to contain a sample for analysis, at least one window to the cavity to transmit the first radiation into the cavity and to transmit a second radiation out, a plurality of reflectors affixed to a housing of the cavity to reflect radiation of a predetermined frequency, the plurality of reflectors separated by a distance that is sufficient to resonate the radiation. The spectroscopic analysis system may be coupled with a nucleic acid sequencing system to receive a single nucleic acid derivative in solution and identify the derivative to sequence the nucleic acid.~~

Please amend **Paragraph [0032]**, as designated in the application as filed, or Paragraph [0034], as designated in the application as published (Publication No. 20040142484), as follows:

**[0032]** FIG. 1 shows a method for identifying a sample based on a resonance enhanced stimulated Raman spectroscopic analysis, according to embodiments of the invention. The method allows identifying a sample based on spectroscopic data that serves as a fingerprint or

signature for the sample. In brief, the method includes adding a sample, such as a single molecule of interest in solution, to a resonant spectroscopic analysis chamber at block 110, analyzing the sample with a resonance enhanced stimulated Raman spectroscopy at blocks 120-160, and identifying the sample based on the analysis at block 170. The analysis of the single molecule is an aspect of some applications, and not a limitation. Other applications may involve analyzing a plurality of molecules. In some embodiments of the invention, the resonance enhanced stimulated Raman spectroscopy may include irradiating a sample contained in a resonance chamber at block 120, scattering radiation from the sample at block 130, resonating the scattered radiation in the chamber at block 140, irradiating or transmitting the scattered radiation from the chamber at block 150, and detecting the irradiated scattered radiation at block 160. In one aspect, the method may be used in coordination with nucleic acid sequencing and may include identifying a single nucleic acid derivative in a sample received from a nucleic acid sequencing system in an effort to sequence a DNA or RNA molecule.